

S/N 10/585295
In response to the Office Action mailed July 21, 2009

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Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) An analytical instrument having improved arrangement of reagent portion, the analytical instrument comprising:

a flow path for moving a sample containing blood cells[.,.] ;

an introduction port for introducing the sample into the flow path[.,.] ;

~~a reagent portion arranged in the flow path, and~~

an electron detection medium for obtaining information necessary for analyzing an analysis target component contained in the sample in relation with an amount of electrons transferred;

a reagent portion arranged directly in the flow path, the reagent portion containing an electron mediator for supplying an electron taken from the analysis target component in the sample to the electron detection medium, at least part of the reagent portion being positioned adjacent to the introduction port; and

an additional reagent portion provided separately from said reagent portion and containing an oxidoreductase for taking an electron from the analysis target component contained in the sample and supplying the electron to the electron mediator;

wherein said reagent portion, the additional reagent portion, and the electron detection medium are provided on a same plane,

wherein the reagent portion contains an electron mediator for supplying an electron taken from the analysis target component in the sample to the electron detection medium, and wherein at least part of the reagent portion is positioned adjacent to the introduction port.

2. (Original) The analytical instrument according to claim 1, wherein the reagent portion is arranged upstream from the electron detection medium in a direction of flow of the sample while being separated from the electron detection medium.

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3. (Original) The analytical instrument according to claim 2, wherein the reagent portion is in a solid state and dissolves when the sample is supplied to the flow path.

4. (Currently Amended) The analytical instrument according to claim 3, An analytical instrument having improved arrangement of reagent portion, the analytical instrument comprising:

a flow path for moving a sample containing blood cells;

an introduction port for introducing the sample into the flow path;

a reagent portion arranged in the flow path; and

an electron detection medium for obtaining information necessary for analyzing an analysis target component contained in the sample in relation with an amount of electrons transferred;

wherein the reagent portion contains an electron mediator for supplying an electron taken from the analysis target component in the sample to the electron detection medium, and at least part of the reagent portion is positioned adjacent to the introduction port,

wherein the reagent portion is arranged upstream from the electron detection medium in a direction of flow of the sample while being separated from the electron detection medium,

wherein the reagent portion is in a solid state and dissolves when the sample is supplied to the flow path,

wherein center-to-center distance between the reagent portion and the electron detection medium is so set that, when the sample contains the analysis target component in maximum amount of a predetermined detection range, electron transfer from the maximum amount of analysis target component to the electron mediator is substantially completed before the electron mediator becomes able to supply electrons to the electron detection medium.

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5. (Currently Amended) The analytical instrument according to claim 3, An analytical instrument having improved arrangement of reagent portion, the analytical instrument comprising:

a flow path for moving a sample containing blood cells;
an introduction port for introducing the sample into the flow path;
a reagent portion arranged in the flow path; and
an electron detection medium for obtaining information necessary for analyzing an analysis target component contained in the sample in relation with an amount of electrons transferred;

wherein the reagent portion contains an electron mediator for supplying an electron taken from the analysis target component in the sample to the electron detection medium, and wherein at least part of the reagent portion is positioned adjacent to the introduction port.

wherein the reagent portion is arranged upstream from the electron detection medium in a direction of flow of the sample while being separated from the electron detection medium,

wherein the reagent portion is in a solid state and dissolves when the sample is supplied to the flow path,

wherein the content of the electron mediator in the reagent portion is so set that, when the sample contains the analysis target component in maximum amount of a predetermined detection range, the electron mediator can receive all the electrons taken from the maximum amount of analysis target component.

6. (Original) The analytical instrument according to claim 1, wherein the electron detection medium contains a color former.

7. (Original) The analytical instrument according to claim 6, wherein the electron detection medium is provided by causing a porous body which is sparingly soluble in the sample to support the color former.

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8. (Original) The analytical instrument according to claim 1, wherein the electron detection medium comprises a conductor.

9. (Original) The analytical instrument according to claim 8, wherein the conductor is utilized for applying voltage to the electron mediator when the sample is supplied to the flow path.

10. (Original) The analytical instrument according to claim 1, wherein the reagent portion contains an oxidoreductase for taking an electron from the analysis target component contained in the sample and supplying the electron to the electron mediator.

11. (Cancelled)

12. (Currently Amended) The analytical instrument according to claim [[11]] 1, wherein the additional reagent portion is arranged between said reagent portion and the electron detection medium in a direction of flow of the sample in the flow path.

13. (Original) The analytical instrument according to claim 12, wherein said reagent portion is larger in area in plan view than the additional reagent portion.

14. (Original) The analytical instrument according to claim 12, wherein said reagent portion is larger than the additional reagent portion in length in the direction of flow of the sample.

15. (Original) The analytical instrument according to claim 12, wherein said reagent portion is smaller in thickness than the additional reagent portion.

16. (Original) The analytical instrument according to claim 15, wherein the thickness of said reagent portion is 15 to 80 % of the thickness of the additional reagent portion.

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17. (Original) The analytical instrument according to claim 12, wherein said reagent portion has an area in plan view which is 1.5 to 10 times an area in plan view of the electron detection medium in the flow path.

18. (Original) The analytical instrument according to claim 12, wherein said reagent portion has a length which accounts for 50 to 90 % of distance from the sample introduction port to an end of the additional reagent portion on the sample introduction port side.

19. (Original) The analytical instrument according to claim 12, wherein said reagent portion and the additional reagent portion are designed to dissolve when the sample is introduced into the flow path.

20. (Original) The analytical instrument according to claim 10, wherein the oxidoreductase is glucose dehydrogenase (GDH).

21. (Original) The analytical instrument according to claim 20, wherein the oxidoreductase is PQQGDH, α GDH or CyGDH.

22. (Original) The analytical instrument according to claim 1, wherein the electron mediator is a Ru complex.

23. (Original) The analytical instrument according to claim 1, wherein the analysis target component in the sample is glucose.

24. (Original) The analytical instrument according to claim 1, wherein the flow path is designed to generate a capillary force.

25-35. (Cancelled)